Introduction to iPhone Development Tools

Session 423

These are confidential sessions—please refrain from streaming, blogging, or taking pictures.

Introduction to iPhone Development Tools

Anders Bertelrud
Xcode Architect

Michael Jurewitz
Developer Tools Evangelist

Mac OS X
Snow Leopard

SDK
280

Unlimited Undo & Redo
Color palette
Transparency Effects
Precise control over font, text style, & paragraph settings
Writing Tools
PROJECT: APPLICATION.APP
ARCHITECT: XCODE

Unlimited Undo
& Redo
Precise control
over font, text
style, & paragraph
settings
Writing
Tools
PROJECT: APPLICATION.APP

Xcode

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& Redo
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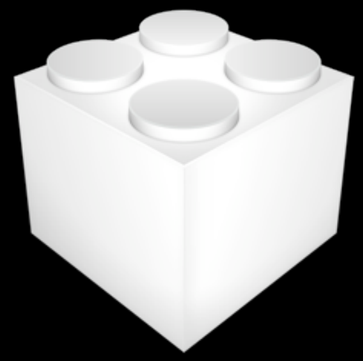
Effects
Precise control
over font, text
style, & paragraph
settings
Writing
Tools
text spacing
Alignment
PROJECT: APPLICATION.APP
ARCHITECT: XCODE
#1

Xcode

What can Xcode help you create?



Demo

Xcode

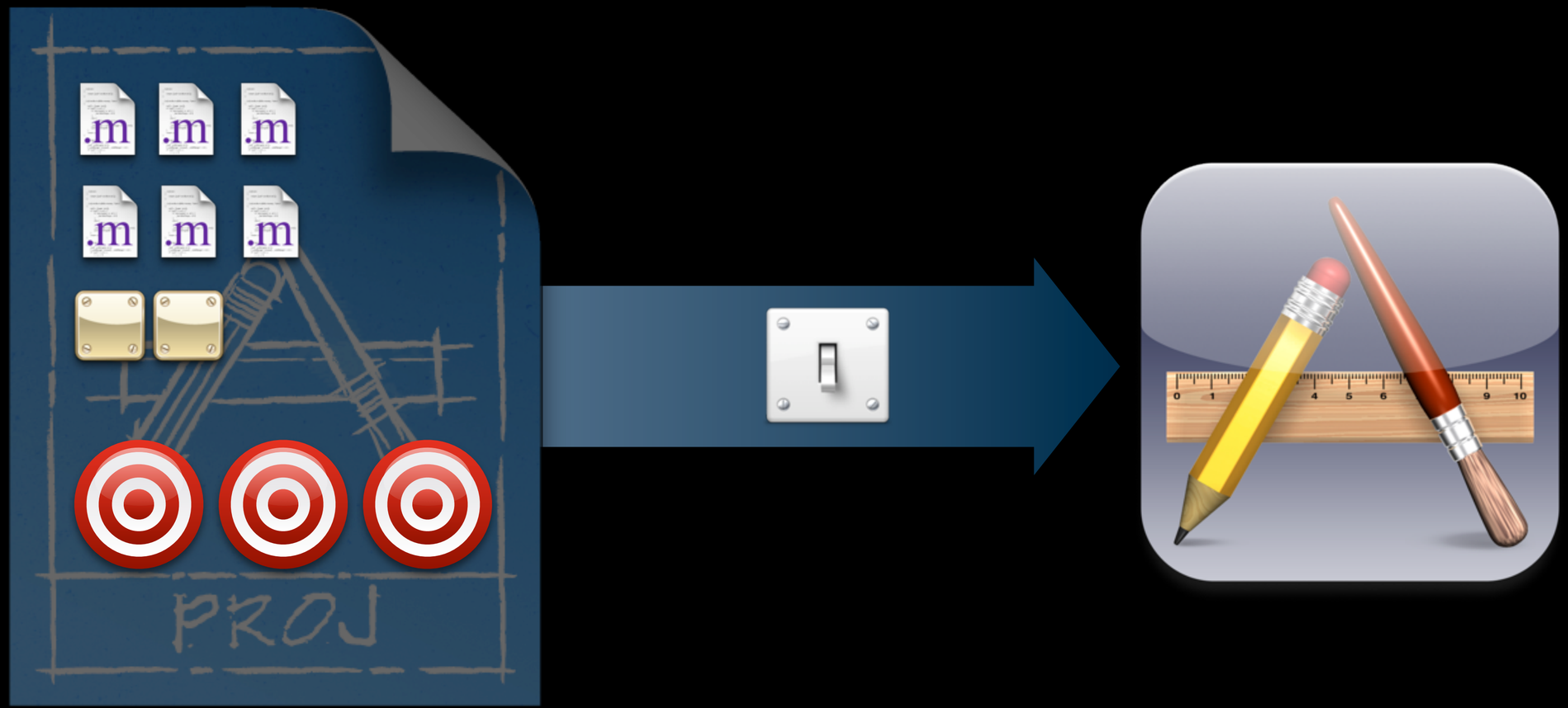
Anders Bertelrud

Some Definitions, Please…

Basic concepts

Some Definitions, Please…

Basic concepts


.m
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PROJ
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5
6
9
10

Xcode

Unlimited Undo
& Redo
Color palette
Transparency
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Writing Tools
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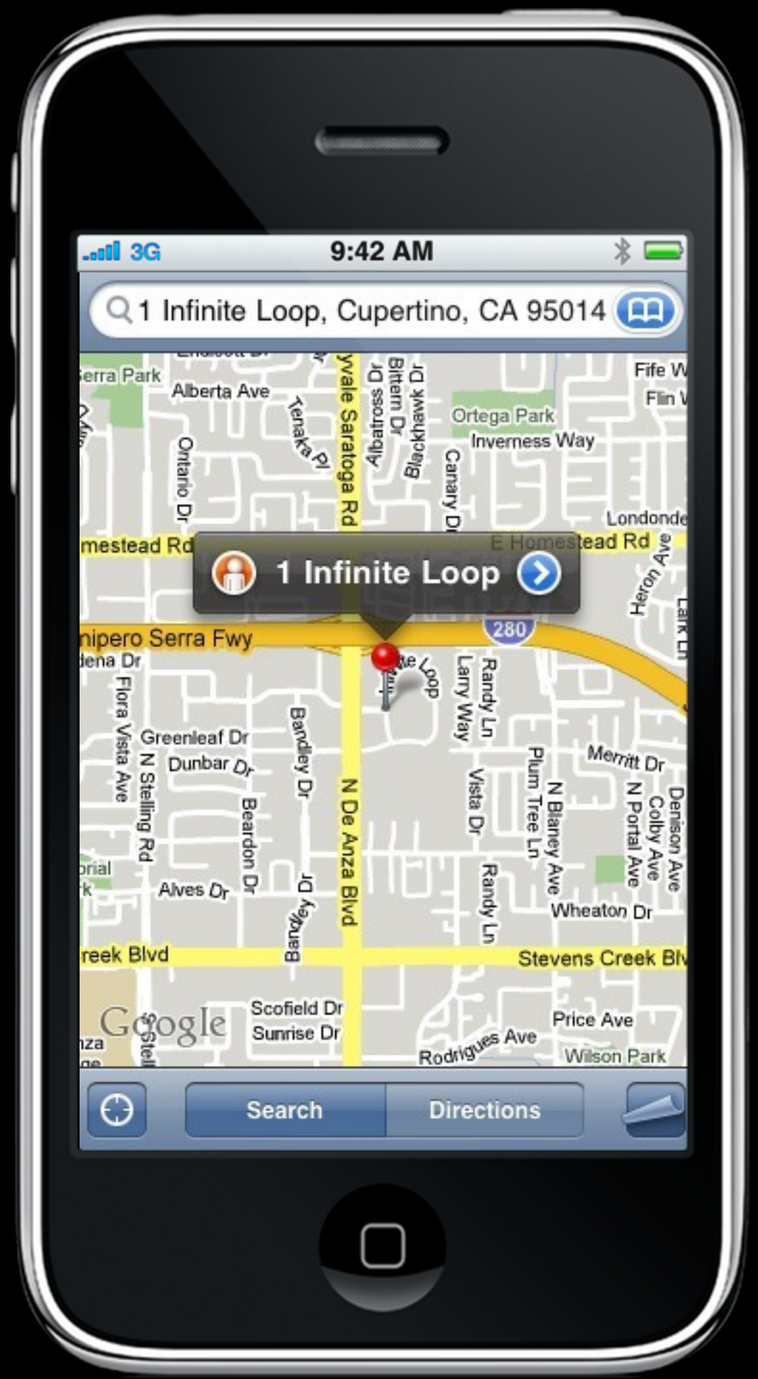
ARCHITECT: XCODE

Interface Builder

Interface Builder

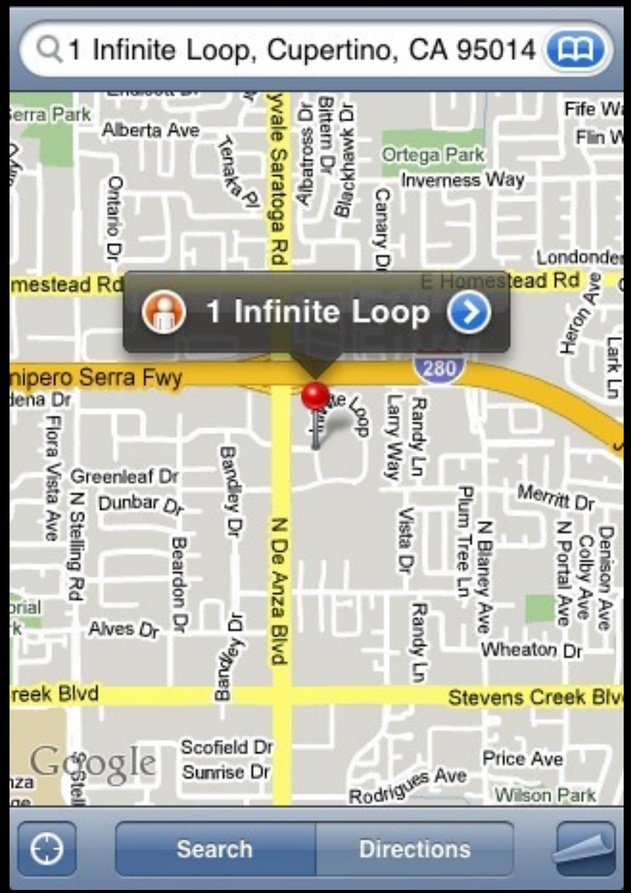
- Graphically layout your interfaces
- Connect your interface to your code



Explaining your code shrinking down to this controller object.

Visually showing interlocking of interface to code

Talk about tools working together for the different tasks and how that parallels to your code and your interface.



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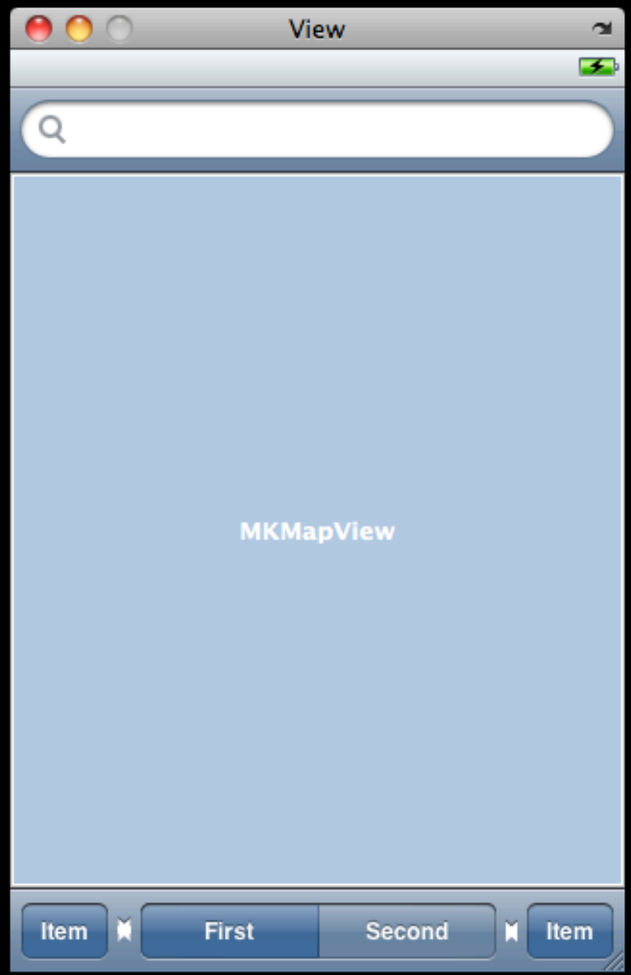

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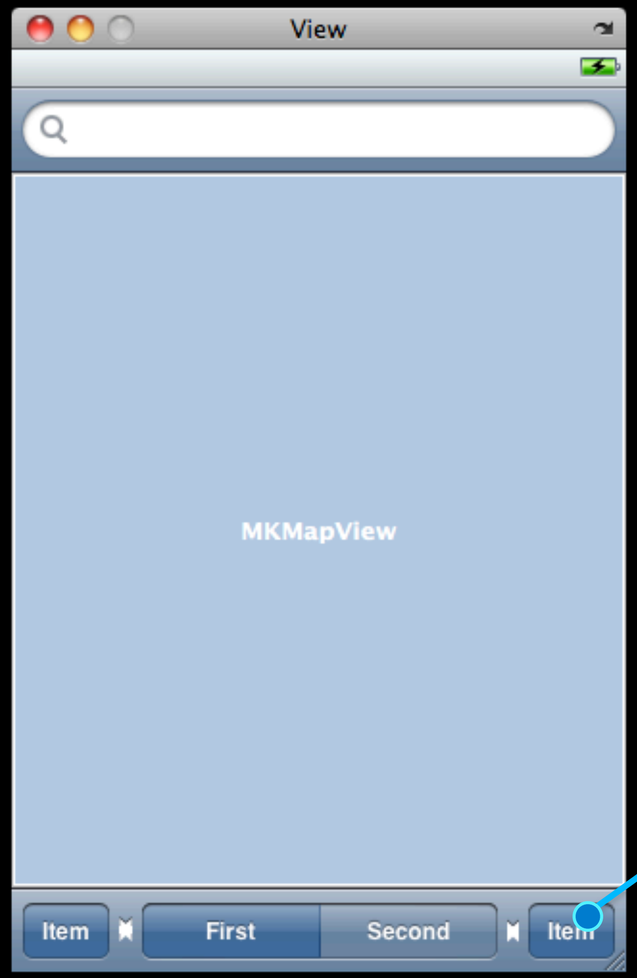
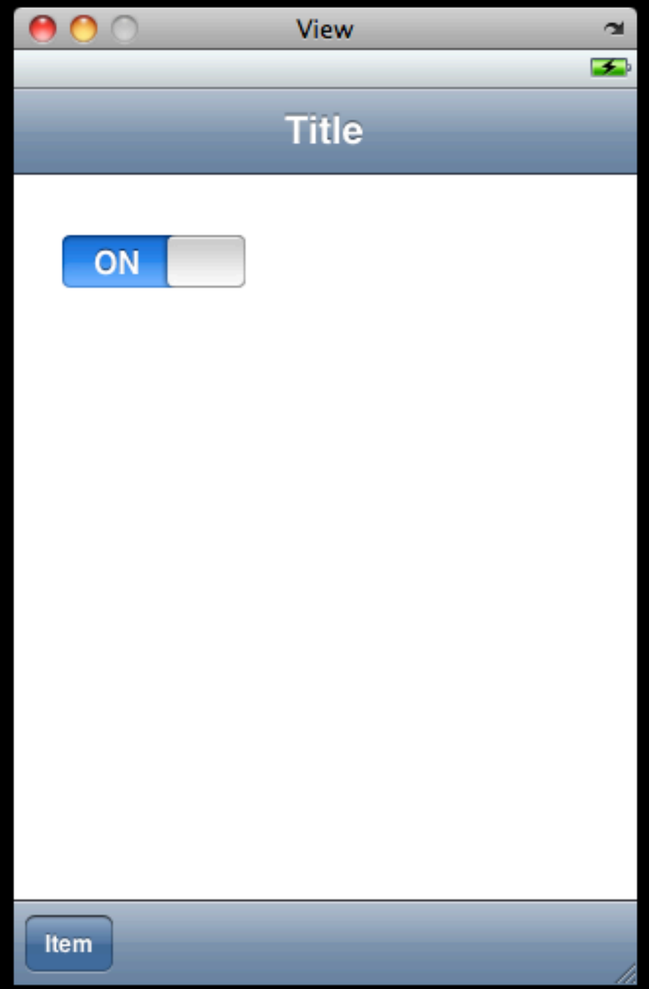



```
-(IBAction) showDirections:(id)sender {
    DirectionsViewController *vc = [[DirectionsViewControll
    vc.title = title;
    vc.location = address;
    [self.navigationController pushViewController:vc anima
    [vc release];
}
```

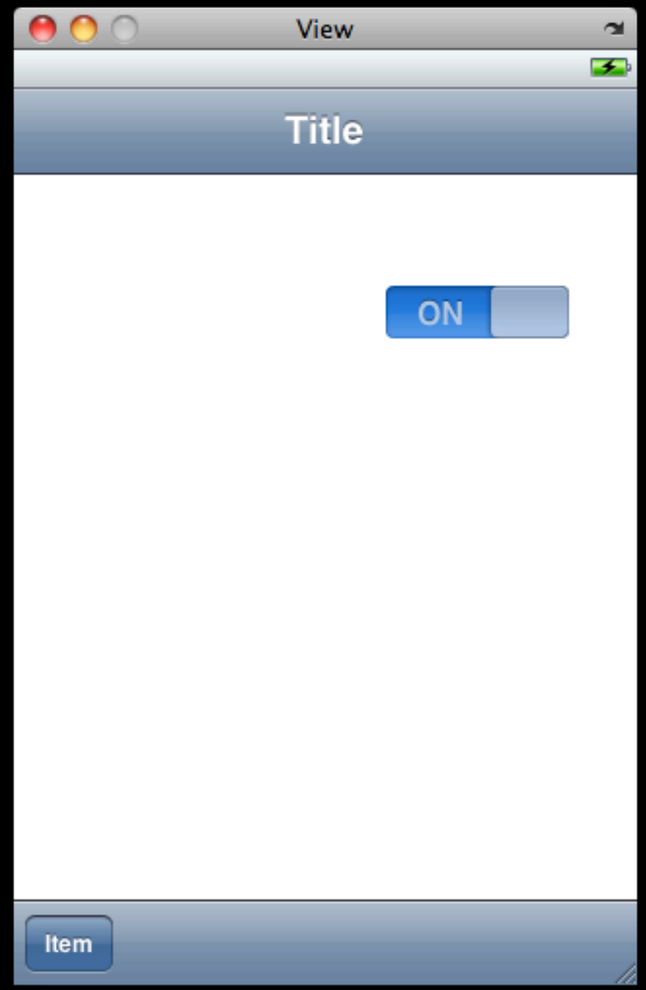
```
float insetFromEdge = 1
float sizeAdjustment = i      Edge * 2;
UIImage * buttonImage = [U      imageNar      fo.png"];
CGRect buttonFrame = CGRect      lica      me.size.width-40,
applicationFrame.size.height-      c      size.width + sizeAdjustment,
buttonImage.size.height + sizeA

UIButton * infoButton = [[UIButto      initWithFrame:buttonFrame];
infoButton.contentEdgeInsets =      Make(insetFromEdge,
insetFromEdge, insetFromEdge,
infoButton.contentVerticalAl      =
UIControlContentVerticalAli      enter;
infoButton.contentHorizon      nment =
UIControlContentHorizon      mentCenter;
```

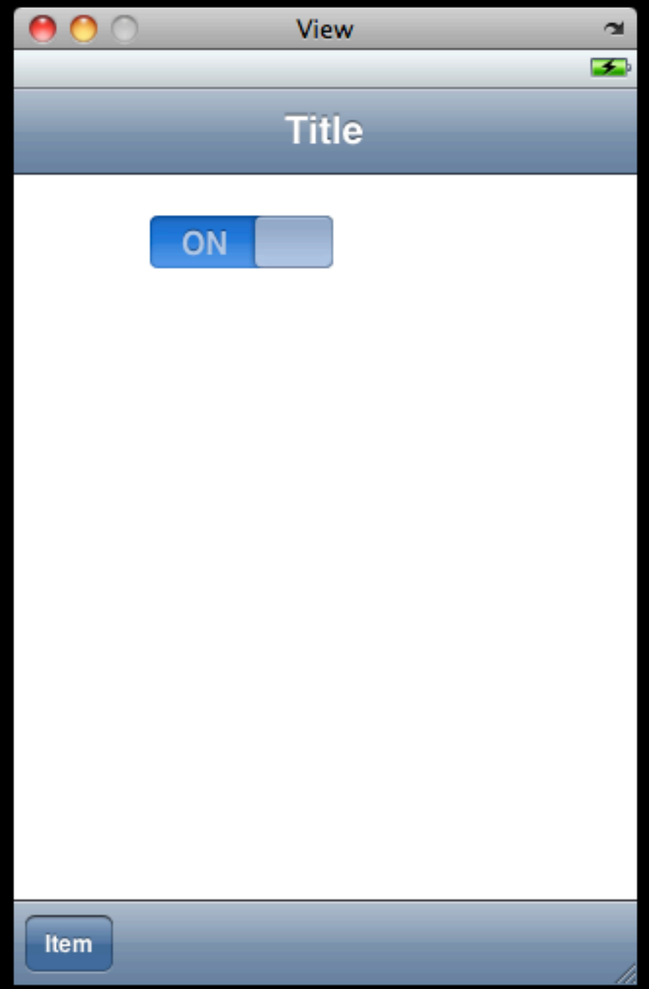
```
aRect = CGRectMake(5,25,25,10);
[[UISwitch alloc] initWithFrame:aRect];
```



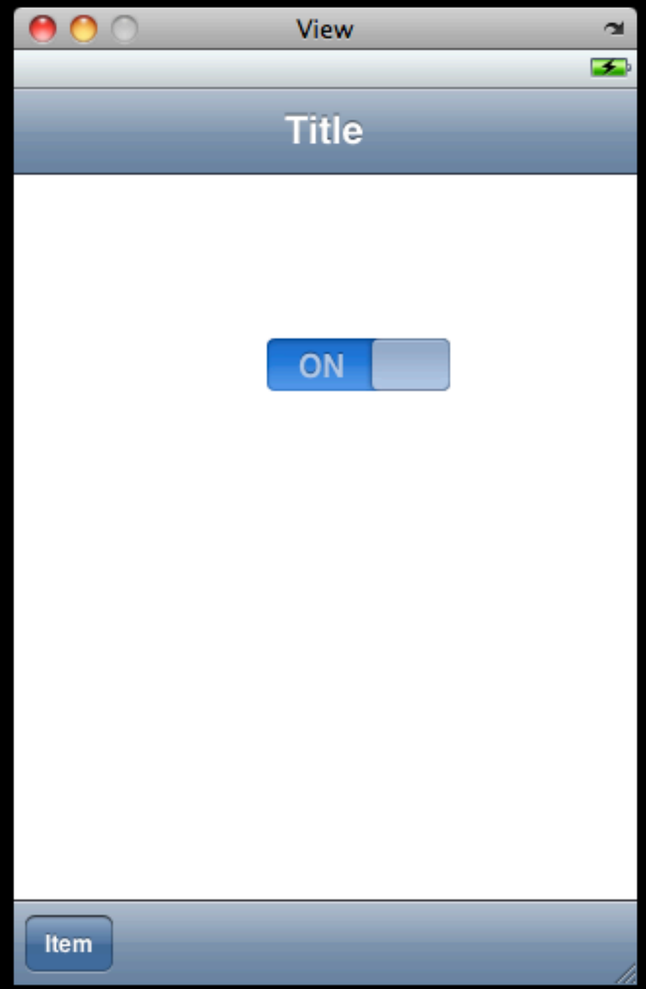
```
aRect = CGRectMake(300,45,25,10);
[[UISwitch alloc] initWithFrame:aRect];
```



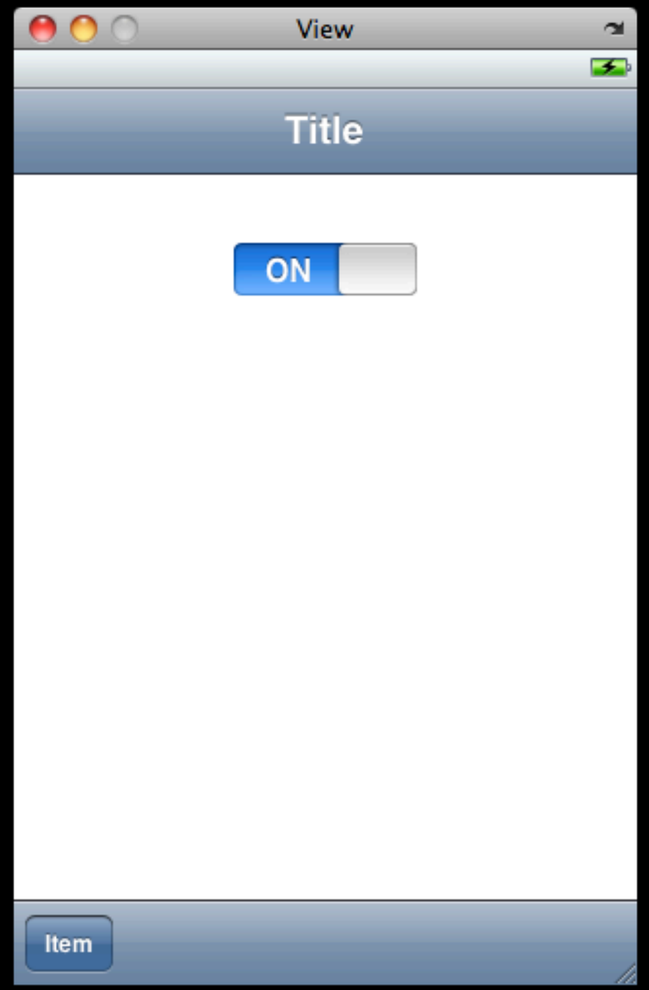
```
aRect = CGRectMake(50,15,25,10);
[[UISwitch alloc] initWithFrame:aRect];
```

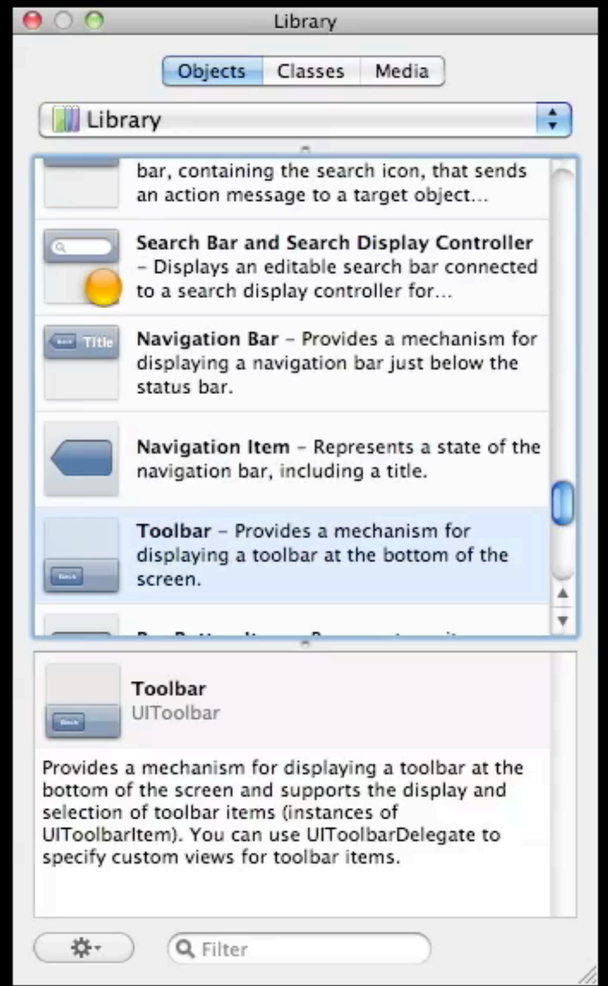


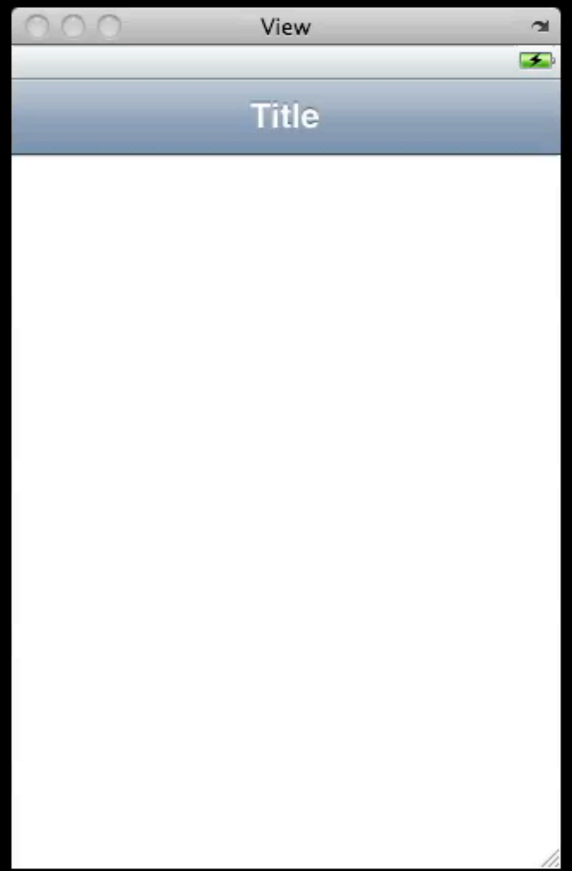
```
aRect = CGRectMake(160,140,25,10);
[[UISwitch alloc] initWithFrame:aRect];
```

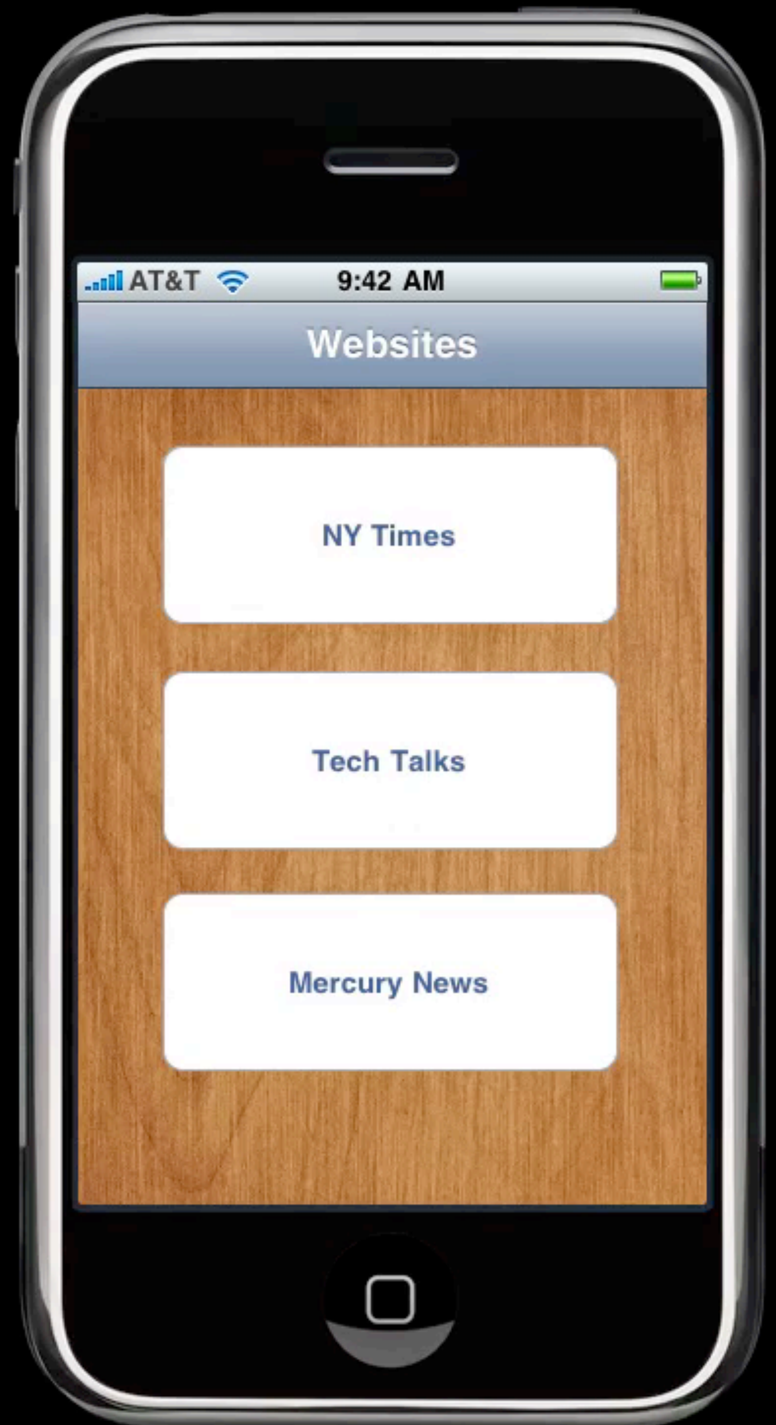


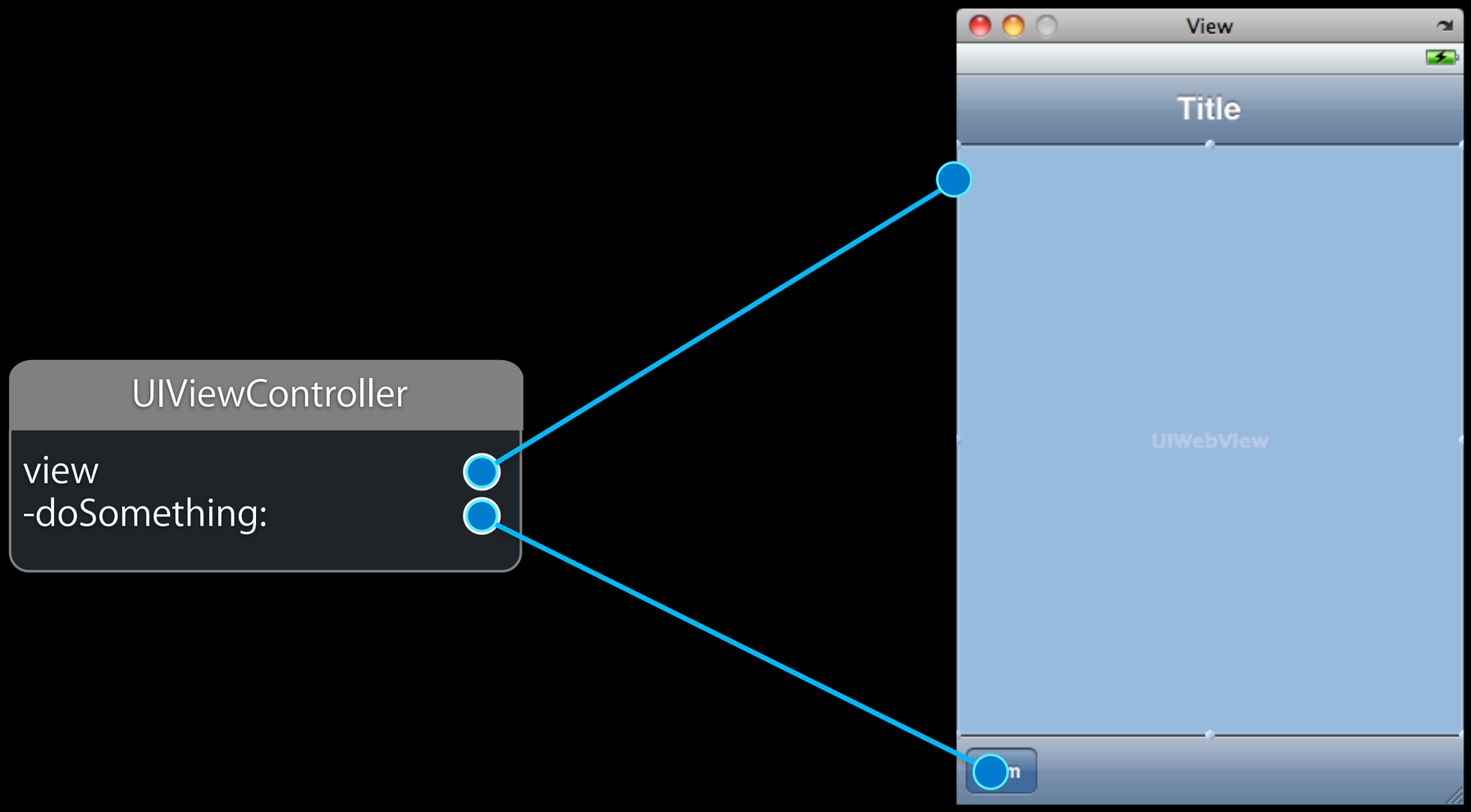
```
aRect = CGRectMake(113,79,25,10);
[[UISwitch alloc] initWithFrame:aRect];
```

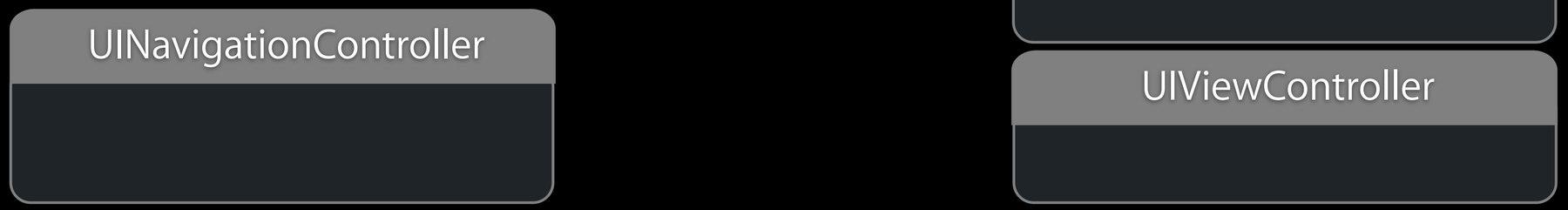



Library
Objects
Classes
Media
Library
bar, containing the search icon, that sends an action message to a target object...
Search Bar and Search Display Controller – Displays an editable search bar connected to a search display controller for...
Title
Navigation Bar – Provides a mechanism for displaying a navigation bar just below the status bar.
Navigation Item – Represents a state of the navigation bar, including a title.
Toolbar – Provides a mechanism for displaying a toolbar at the bottom of the screen.
Toolbar
UIToolbar
Provides a mechanism for displaying a toolbar at the bottom of the screen and supports the display and selection of toolbar items (instances of UIToolbarItem). You can use UIToolbarDelegate to specify custom views for toolbar items.
Filter


View
Title


AT&T
9:42 AM
Websites
NY Times
Tech Talks
Mercury News


View
Title
UIWebView
UIViewController
view
-doSomething:


UINavigationController
UIViewController
UIViewController
UIViewController

Demo

Interface Builder

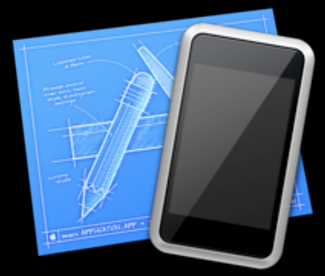
Michael Jurewitz

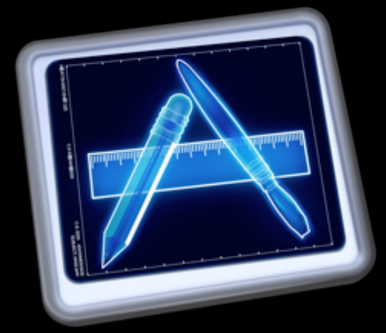
Interface Builder

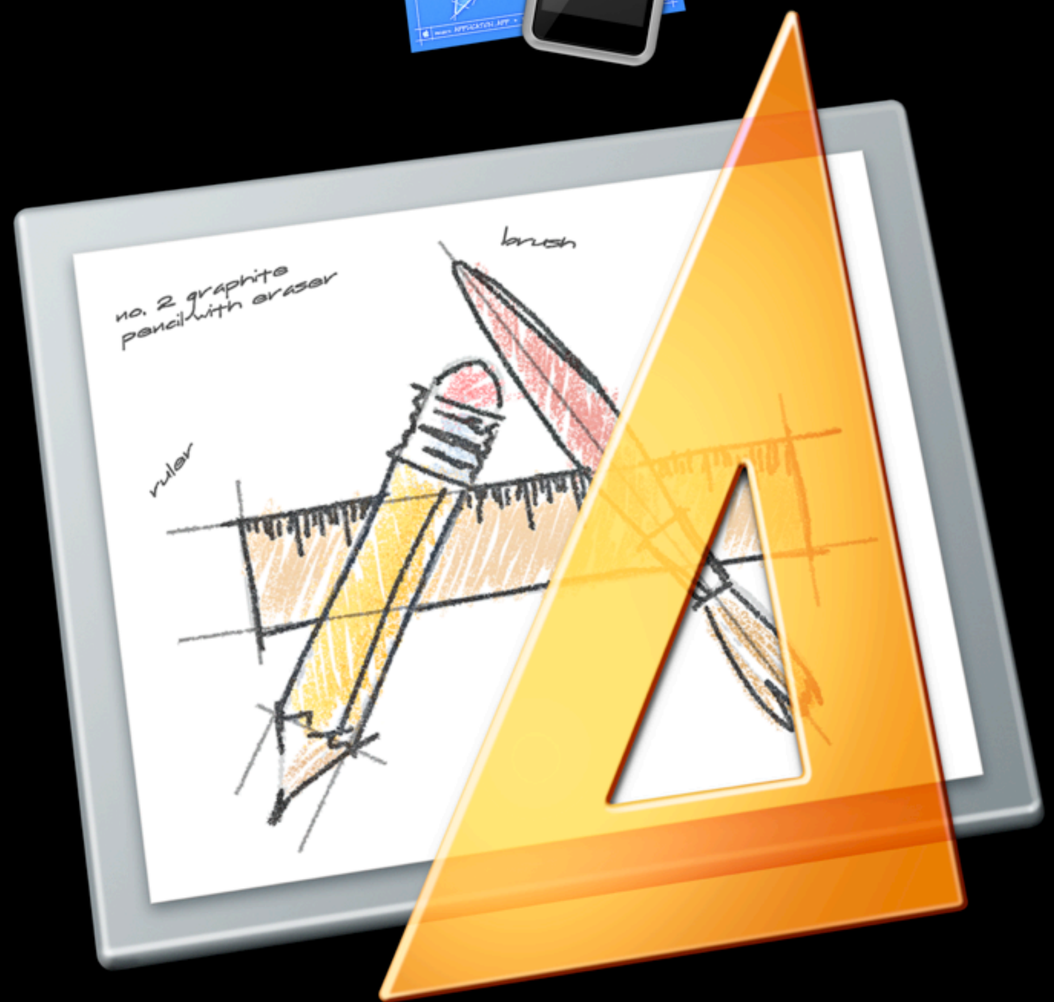
What did we just see?

- Designed your interface
- Connected it to your code

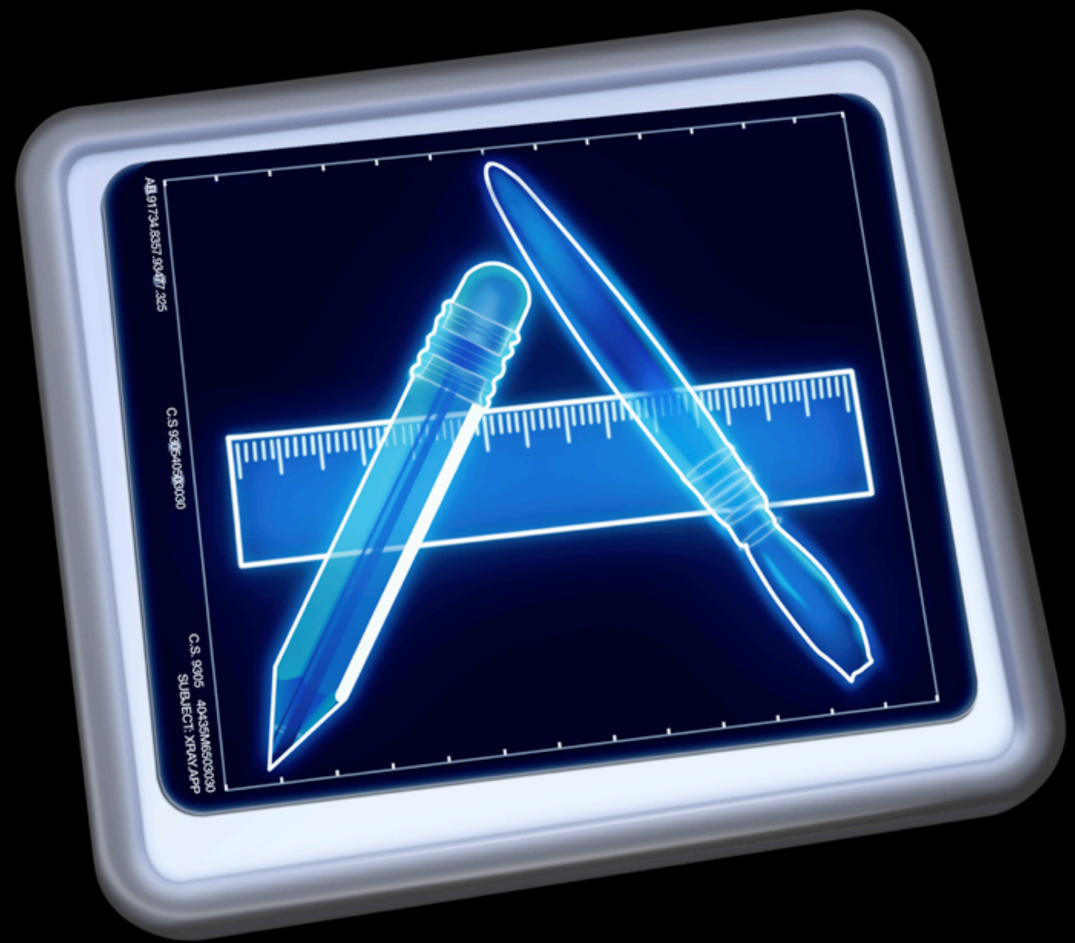
Interface Builder






launch
no. 2 graphite
pencil with eraser
ruler

Instruments



Instruments

- Versatile performance profiling
- Powerful analysis
- Fully understand the context of your data

Timing

Memory

Timing

Input/Output

Demo

Instruments

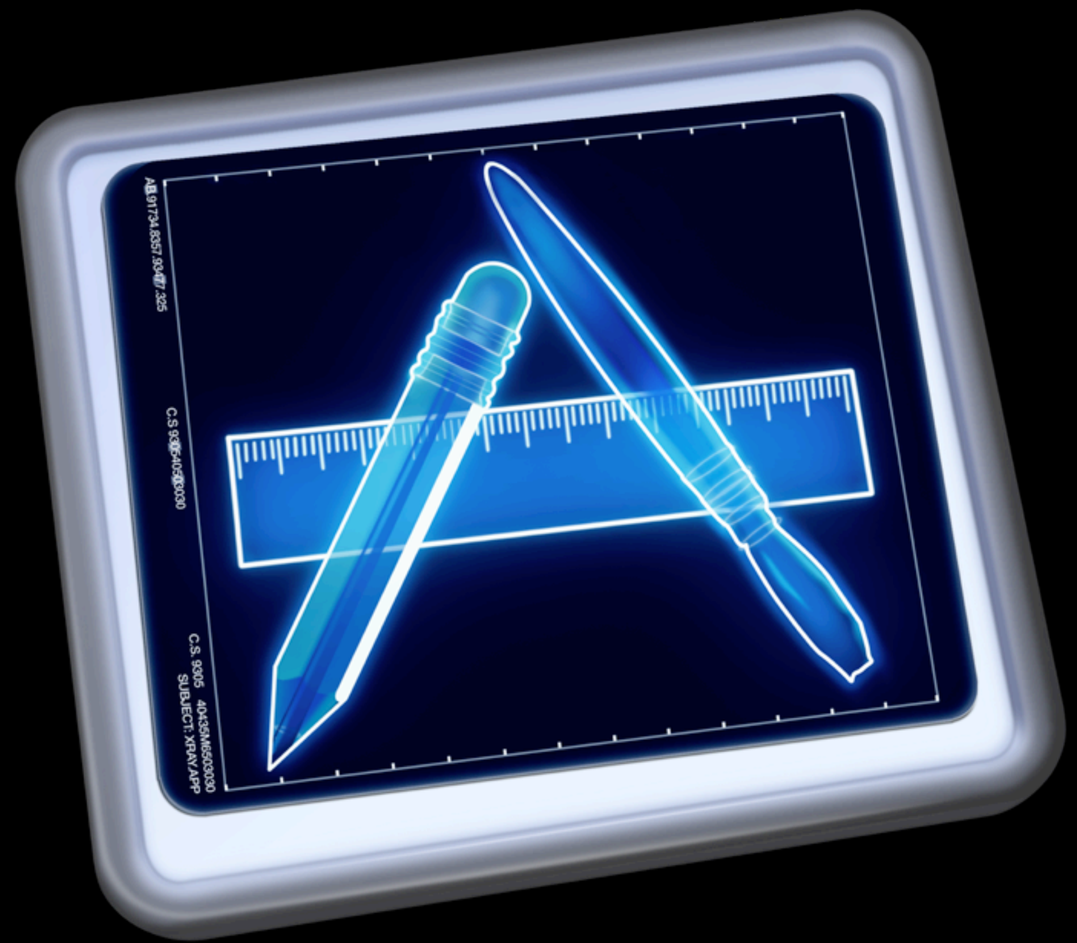
Michael Jurewitz

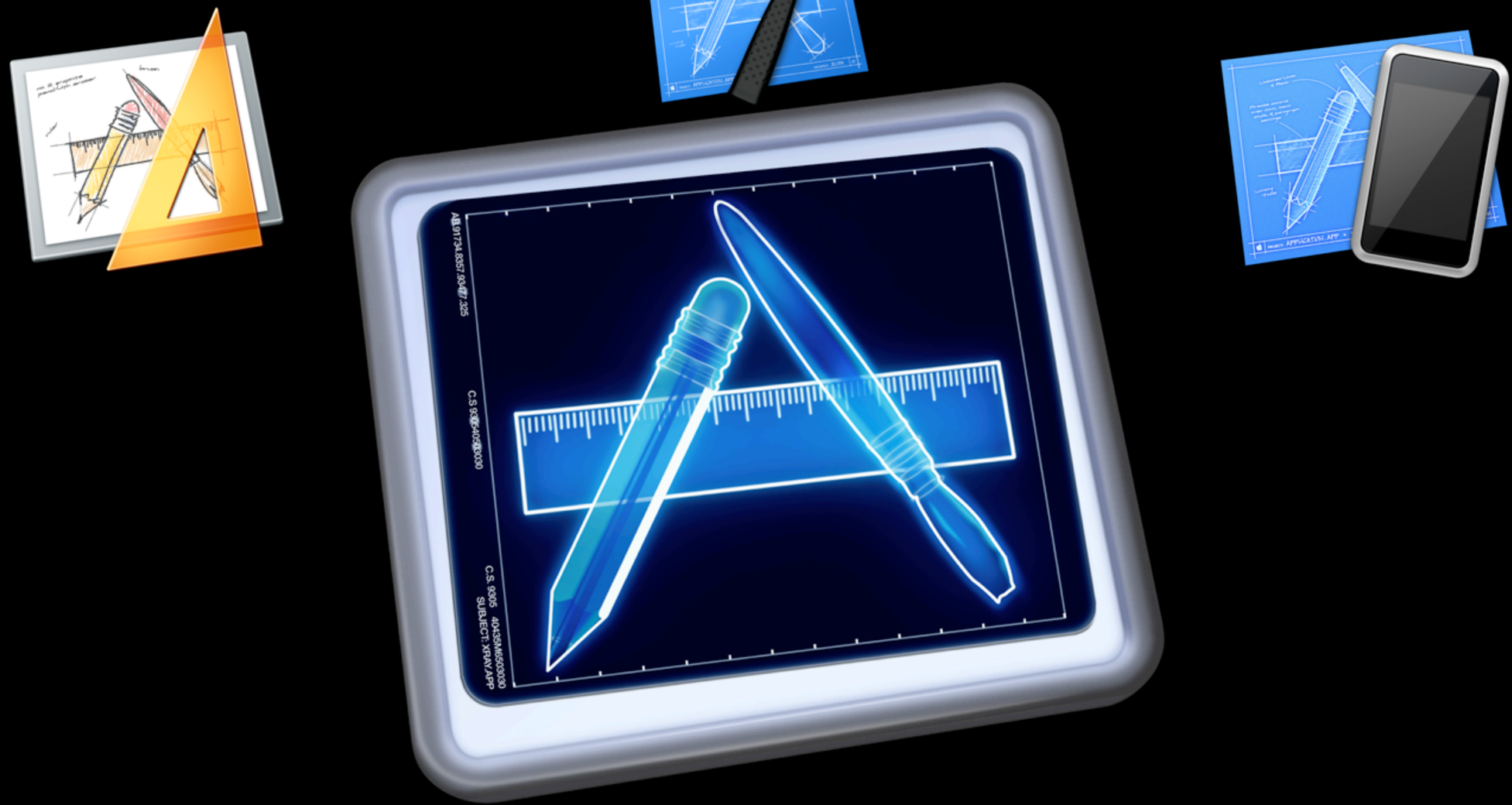
Instruments

What did we just see?

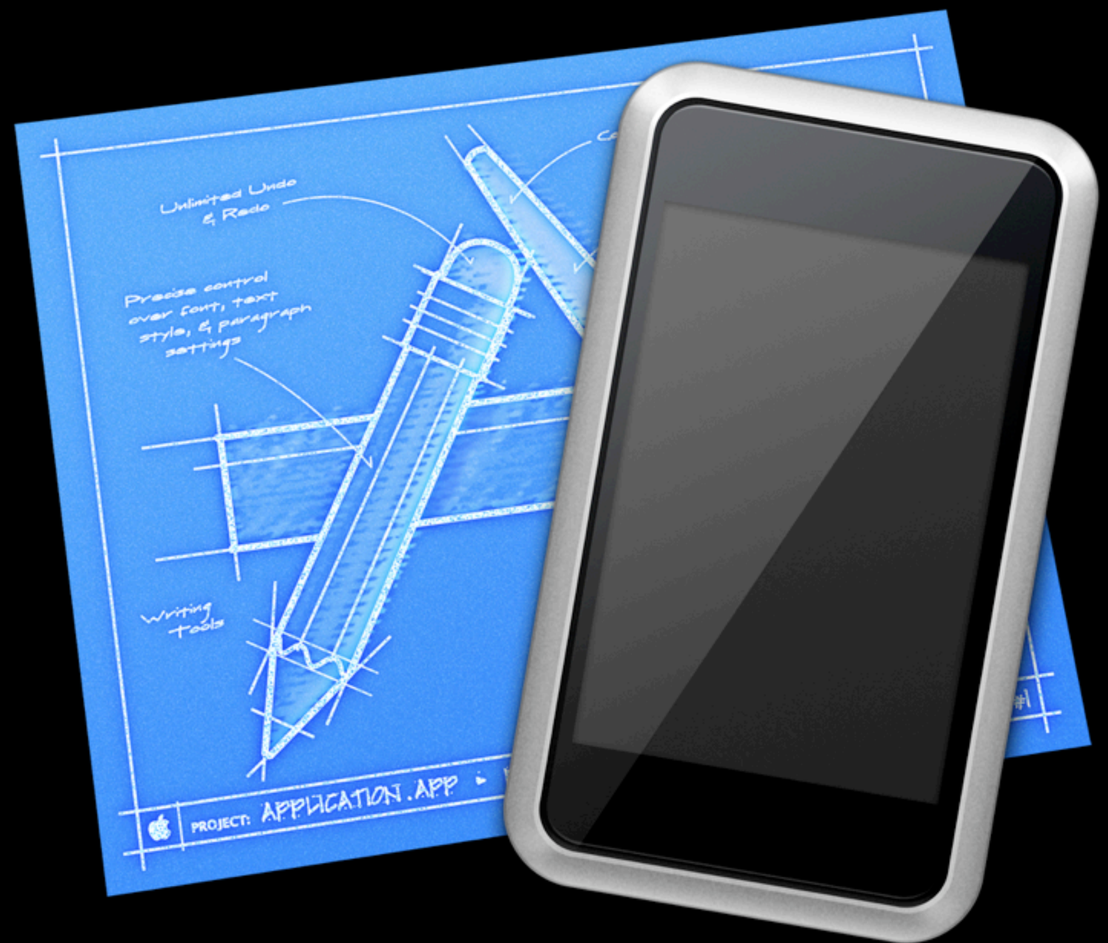
- Collect data from multiple sources
- Data mining
- Better understand the context of your data

Instruments





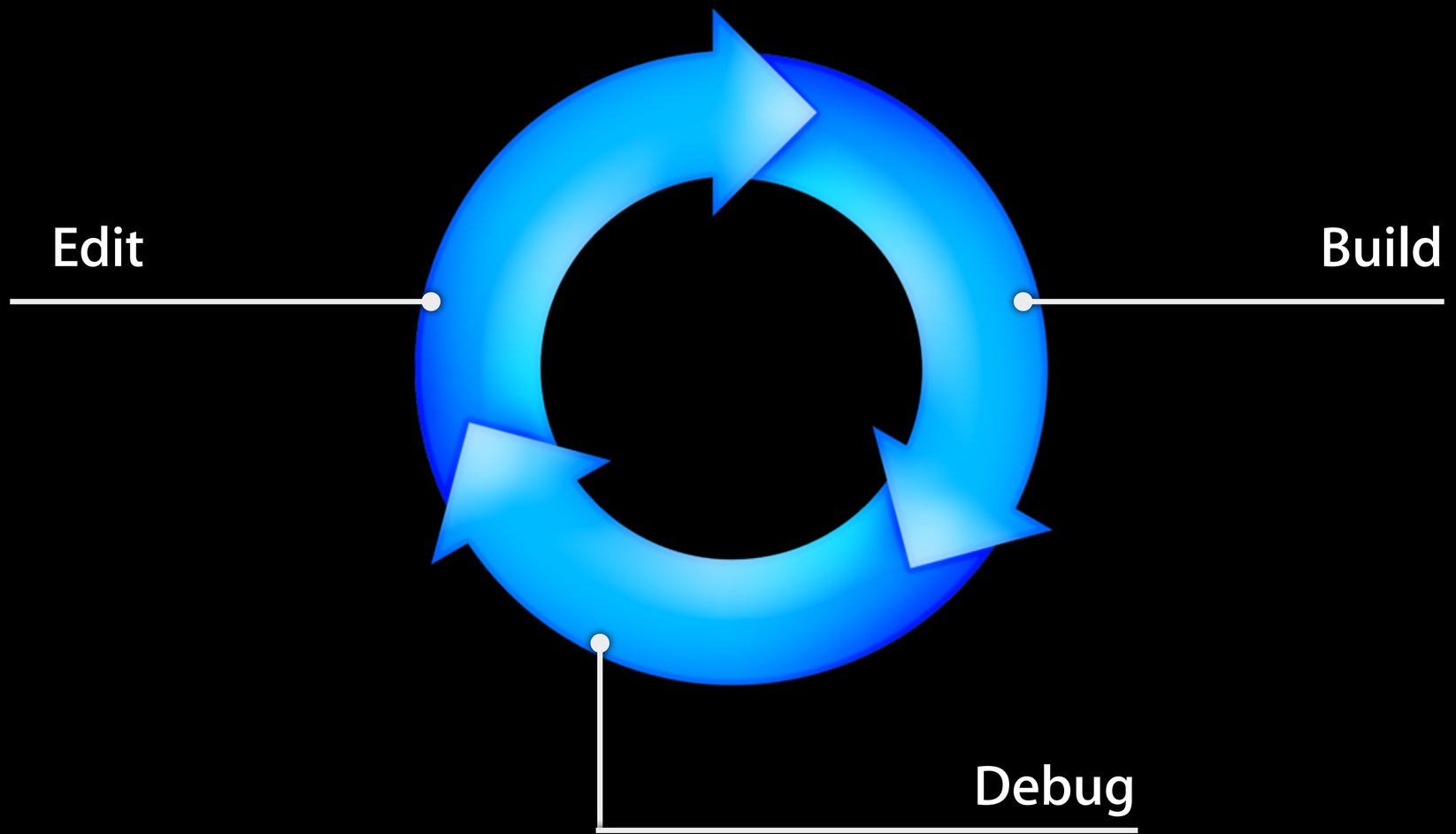
iPhone Simulator



iPhone Simulator

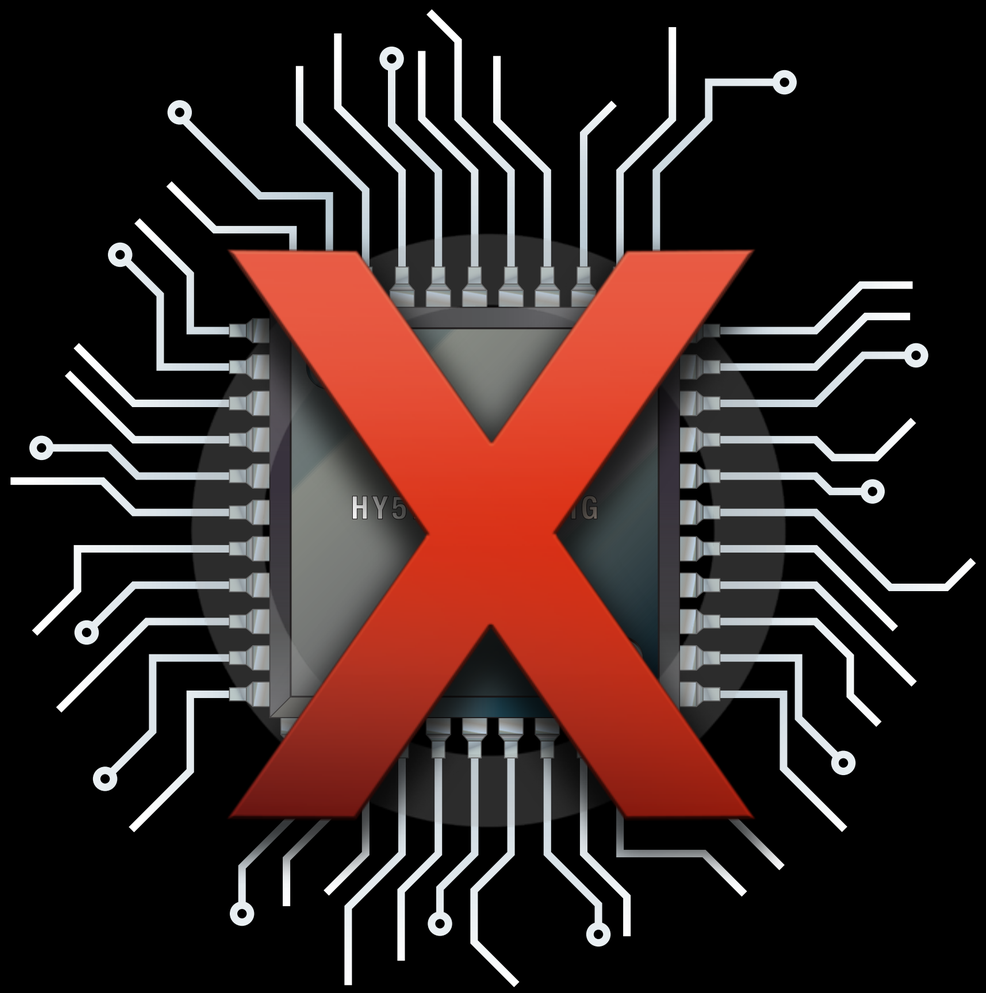
Why use it?

- Faster edit-build-test iteration
- More analysis tools
- Easier to test exceptional conditions
- Don’t need a device connected


Edit
Build
Debug

DTrace

Lost Objects


HY5
G

intel
Core 2 Duo

Device vs. Simulator

The differences have implications…

Device vs. Simulator

Taking advantage of the differences

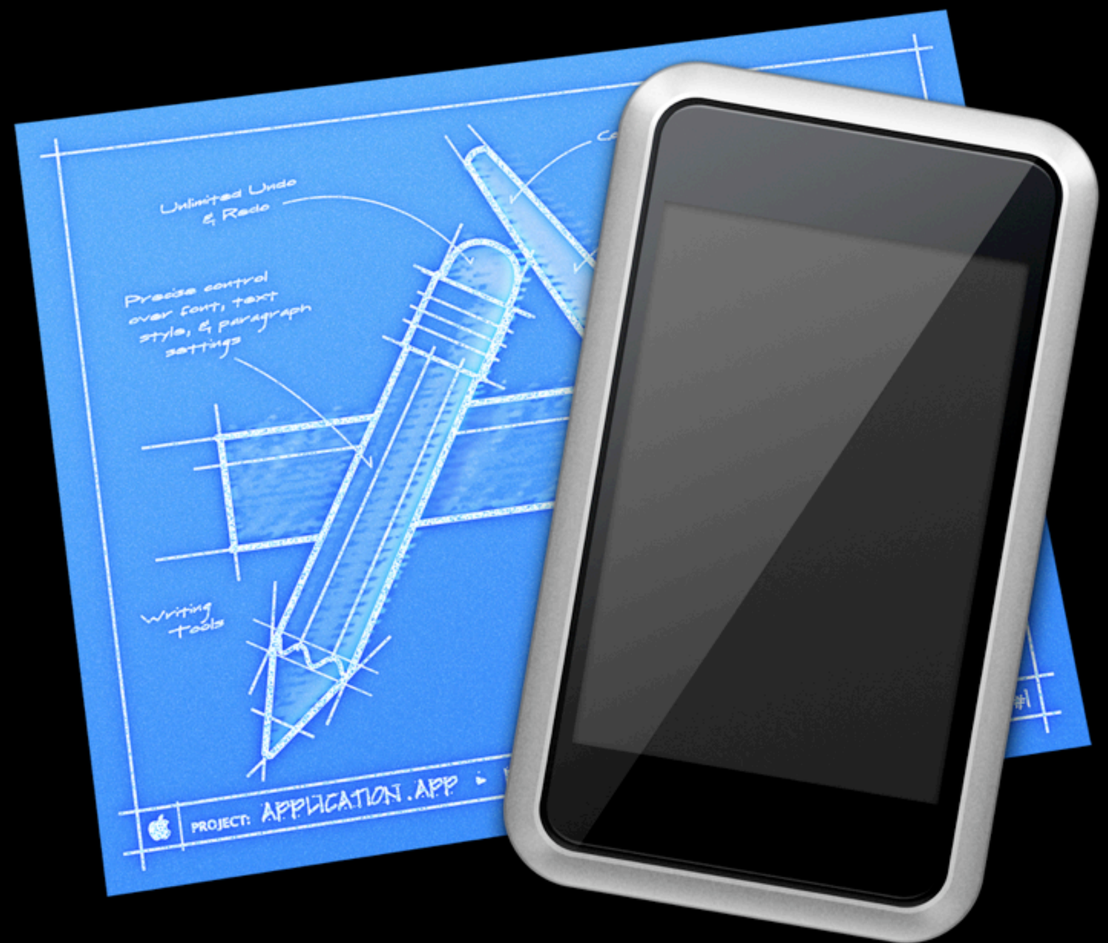
Device vs. Simulator

Taking advantage of the differences

```
#if TARGET_IPHONE_SIMULATOR
    // Simulator-specific code
#else
    // iPhone-specific code
#end
```

Fastest Turnaround	✗	✓
Debugging	✓	✓
Performance Tuning	✓	✗
Memory Tuning/Leak Checking	✓	✓
File Access Analysis	✓	✓
Testing Hardware Accessories	✓	✗
Accessing Location Information	✓	✗
Accessing Camera and Accelerometer	✓	✗

iPhone Simulator



Unlimited Undo
& Redo
Precise control
over font, text
style, & paragraph
settings
Writing
Tools
PROJECT: APPLICATION.APP

Unlimited Undo & Redo
Color palette
Transparency Effects
Precise control over font, text style, & paragraph settings
Writing Tools
PROJECT: APPLICATION.APP
ARCHITECT: XCODE

More Information

Michael Jurewitz
Developer Tools and Performance Evangelist
jurewitz@apple.com

Documentation
Xcode Quick Tour for iPhone OS
Xcode Overview
Interface Builder User Guide
Instruments User Guide
Shark User Guide
http://developer.apple.com/iPhone

Q&A

WWDC Session Survey

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developer.apple.com/wwdc/attendee

Related Sessions

Intro to Cocoa and Cocoa Touch Development with Xcode	Marina Tuesday 10:30AM
Getting Started with Interface Builder	Pacific Heights Wednesday 9:00AM
iPhone Application Design Using Interface Builder	Pacific Heights Wednesday 10:30AM
Customizing Xcode for Your Development Workflow	Pacific Heights Wednesday 5:00PM
Advanced Debugging and Performance Analysis	Nob Hill Thursday 9:00AM

WWDC09